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CLAIMS

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## [Claim(s)]

[Claim 1] In the display of a spectrum screen, the setting information on the assignment level location on a display tube side is received. The level of this location is computed as an amount of predetermined offset. The analog direct current signal from the frequency-conversion section Multiplication is carried out with the magnification set point corresponding to a setup. the difference signal which subtracted in said amount of predetermined offset, and was subtracted above — winning popularity — predetermined [ of a tubular surface display ] — resolution — The spectrum method of presentation which the amount of predetermined offset was added, the A-D converter was supplied in response to said multiplication signal, and the setting location maintained immobilization by this, and carried out the reduced display and was characterized for display spectrum by the enlarged display or providing the above.

[Claim 2] In the display of a spectrum screen, the setting information on the partition field specified on the display tube side is received. The level of this center of a partition is computed as an amount of predetermined offset. The analog direct current signal from the frequency-conversion section Receive the difference signal which subtracted in said amount of predetermined offset, and was subtracted above, and the magnification set point which expands the vertical level section of this partition field to the whole tubular surface is computed. With this magnification set point, carry out multiplication and output, and in response to said multiplication signal, add the amount of predetermined offset and an A-D converter is supplied. The spectrum method of presentation which made this partition field the frequency span, carried out sweep control, carried out the enlarged display of the display spectrum of a setting partition field to the whole tubular surface by this, and was characterized by providing the above.

[Claim 3] In the display of the spectrum screen which has the A-D converter which carries out quantization conversion of the analog direct current signal of the frequency conversion section which carries out sweep measurement, and the detected spectrum level at digital data The offset subtraction section which asks for the level of this location as an amount of predetermined offset, and subtracts the analog direct current signal from the frequency-conversion section in said amount of predetermined offset in response to the setting information on the assignment level location on a display tube side, the difference signal subtracted above — winning popularity — predetermined [ of a tubular surface display ] — resolution — with the multiplication section which carries out multiplication and which is outputted with the magnification set point corresponding to a setup The spectrum analyzer characterized by the offset adder unit which supplies the analog signal adding the amount of predetermined offset to an A-D converter in response to said multiplication signal, and providing the above.

[Claim 4] In the display of the spectrum screen which has the A-D converter which carries out quantization conversion of the analog direct current signal of the frequency conversion section which carries out sweep measurement, and the detected spectrum level at digital data The offset subtraction section which asks for the level of this center of a partition as an amount of predetermined offset, and subtracts the analog direct current signal from the frequency-conversion section in said amount of predetermined offset in response to the setting information on the partition field specified on the display tube side, The multiplication section which carries out multiplication and which receives the difference signal subtracted above, calculates the magnification set point which expands the vertical level section of this partition field to the whole tubular surface, and is outputted with this magnification set point, The offset adder unit which supplies the analog signal adding the amount of predetermined offset to an A-D converter in response to said multiplication signal, The spectrum analyzer which carried out sweep control of the frequency-conversion section for the frequency shaft scale section of this partition field as a frequency span of a frequency shaft, and was characterized by providing the above.

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[Translation done.]

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DETAILED DESCRIPTION

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[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to the enlarged display or the reduced-display technique in a display of a spectrum screen.

[0002]

[Description of the Prior Art] The example of a configuration of the general spectrum analyzer of drawing 7 and the example of a spectrum display to which the assignment level location of drawing 3 is expanded as immobilization are shown, and the conventional technique is explained. In addition, generally there shall be a rotary knob which moves the key switch, cursor location, and marker position for a terms-and-conditions setup in a spectrum analyzer, and actuation use of this shall be carried out. A configuration changes with the frequency-conversion section 60, gain transducer 50b, A-D converter 75, the operation control section 80, and a display 90. Gain transducer 50b changes by the multiplication section 54 and DA converter 59.

[0003] The operating procedure for carrying out the enlarged display of the spectrum level so that the assignment level location 10 on the tubular surface shown [ 1st ] in drawing 3 may serve as immobilization in the location is explained. Here, it is assumed that it is what has a marker in the assignment level location 10 on a tubular surface by a rotary knob etc. beforehand. Enlarged display actuation is carried out from this time. predetermined [ which is the Y-axis scale of the 2 dB/Div. step which shows Y-axis scale 10 dB/Div. to drawing 3 (b), for example shown in drawing 3 (a) as the 1st step ] — a setting change is made at resolution 12. At this time, since the reference level of screen level upper limit is the same -40dBm as drawing 3 (a), it is in the condition that spectrum disappears and it is not visible at all from on the tubular surface. In addition, it is necessary to keep the level (about -70dBm location) of the assignment level location 10 in mind before this actuation. The input of a numerical keypad performs setting actuation which makes reference level the -64dBm numeric value added to this value 6dB so that the above -70dBm location of abbreviation which kept reference level in mind may come in the center as the 2nd step. The spectrum screen shown in drawing 3 (b) as a result is displayed.

[0004] Like the above-mentioned explanation, in order to change into the desired display screen, there is a difficulty with many key stroke steps, and there is also a difficulty that spectrum disappears temporarily from a screen further in the middle of actuation. Moreover, because of a key stroke, a look will be removed from on a screen and it is not desirable from a human-engineering-viewpoint. It concentrates on the observation of spectrum considered as attention, and these to an operator has a \*\*\*\*\* difficulty. Moreover, whenever it changed Y-axis scale sensibility, the same actuation needed to be repeated and there was inconvenience on actuation.

[0005] The operating procedure for carrying out the enlarged display of the partition field 20 which drawing 4 specified [ 2nd ] to the whole tubular surface is explained. Here, it is assumed that it is the condition that the partition field 20 was beforehand specified by the rotary knob etc. It considers as the expansion actuation to the whole tubular surface from this point in time. As the 1st step, a setting change of the resolution of a Y-axis scale is made for the Y-axis scale section 25 of the partition field 20 shown in drawing 4 (a) as 2dB/Div. in an estimate. At this time, since the reference level of screen level upper limit is the same -60dBm as drawing 4 (a), the spectrum of the partition field 20 is in the condition that it disappears and is not visible from on the tubular surface. in addition, before this actuation — the level value of Y-axis scale section 25 upper limit of the partition field 20 — an estimate — asking (about -104dBm location) — it is necessary to keep it in mind The input of a numerical keypad performs setting actuation which makes reference level the aforementioned -104dBm value of abbreviation kept in mind as the 2nd step. Consequently, the spectrum in the condition that only the Y-axis scale section 25 was

expanded is displayed. As the 3rd step, start frequency 31low of the frequency shaft scale section 35 of the partition field 20 and termination frequency 32hi are made by 930MHz, and make a setting change as 950MHz in an estimate. Consequently, as finally shown in drawing 4 (b), the enlarged display of the Y-axis scale section 25 and the frequency shaft scale section 35 will be carried out to the whole tubular surface. Like the above-mentioned explanation, much more much operating procedure was needed, and the actuation which carries out the enlarged display of the partition field 20 to the whole tubular surface had a difficulty used as the further complicated actuation, and had practical inconvenience.

[0006]

[Problem(s) to be Solved by the Invention] Then, in the enlarged display or reduced display of a spectrum screen, the technical problem which this invention tends to solve establishes the control means which makes the actuation input easy, and aims at improvement in the convenience of expansion/contraction actuation.

[0007]

[Means for Solving the Problem] Fig. 1, Fig. 2, and Fig. 3 show the solution means concerning this invention. In order to solve the above-mentioned technical problem to the 1st, with the configuration of this invention In response to the setting information on the assignment level location 10 on a display tube side, the level of a location is computed as amount of predetermined offset 11of. Analog direct current signal 71dc from the frequency-conversion section 60 is subtracted by said amount of predetermined offset 11of. Multiplication is carried out by magnification set point 13mul corresponding to 12 setup. difference signal 10b subtracted above — winning popularity — predetermined [ of a tubular surface display ] — resolution — In response to said multiplication signal, amount of predetermined offset 11of is added, A-D converter 75 is supplied, and thereby, a setting location maintains immobilization and makes display spectrum an enlarged display or the method of presentation which carries out a reduced display. Thereby, in the reduced display in the assignment level location 10 on a tubular surface, its expansion/contraction becomes very easy.

[0008] Fig. 4 and Fig. 6 show the solution means concerning this invention. In order to solve the above-mentioned technical problem to the 2nd, with the configuration of this invention In response to the setting information on the partition field 20 specified on the display tube side, the level of the center of a partition is computed as amount of predetermined offset 11of. Analog direct current signal 71dc from the frequency-conversion section 60 is subtracted by said amount of predetermined offset 11of. Receive difference signal 10b subtracted above, and magnification set point 13mul which expands the vertical level section of the partition field 20 to the whole tubular surface is computed. With the magnification set point, multiplication is carried out and it outputs, and in response to said multiplication signal, amount of predetermined offset 11of is added, A-D converter 75 is supplied, and it considers as the method of presentation which carries out sweep control and carries out the enlarged display of the display spectrum of the setting partition field 20 to the whole tubular surface by this by making the partition field 20 into a frequency span. Thereby, in the display of a spectrum screen, partition field 20 expansion / contraction zoom made into the purpose becomes very easy.

[0009] Fig. 1, Fig. 2, Fig. 3, and Fig. 5 show the solution means concerning this invention. In order to solve the above-mentioned technical problem to the 3rd, with the configuration of this invention In response to the setting information on the assignment level location 10 on a display tube side, it asks for the level of a location as amount of predetermined offset 11of. The offset subtraction section 52 which subtracts analog direct current signal 71dc from the frequency-conversion section 60 by said amount of predetermined offset 11of, difference signal 10b subtracted above — winning popularity — predetermined [ of a tubular surface display ] — resolution — with the multiplication section 54 which carries out multiplication and which is outputted by magnification set point 13mul corresponding to 12 setup In response to said multiplication signal, it considers as the configuration means used as the offset adder unit 56 which supplies the analog signal adding amount of predetermined offset 11of to A-D converter 75. In expansion/reduced display of a spectrum screen which has A-D converter 75 which carries out quantization conversion of the frequency conversion section 60 which carries out sweep measurement, and the analog direct current signal of the detected spectrum level by this at digital data, while the location maintains immobilization only by specifying the assignment level location 10 on a tubular surface, expansion / zoom function to reduce can be realized with sufficient operability.

[0010] Fig. 4, Fig. 5, and Fig. 6 show the solution means concerning this invention. In order to solve the above-mentioned technical problem to the 4th, with the configuration of this invention In response to the setting information on the partition field 20 specified on the display tube side, it asks for the level of the center of a partition as amount of predetermined offset 11of. The offset subtraction section 52 which

subtracts analog direct current signal 71dc from the frequency-conversion section 60 by said amount of predetermined offset 11of. The multiplication section 54 which carries out multiplication and which receives difference signal 10b subtracted above, calculates magnification set point 13mul which expands the vertical level section of the partition field 20 to the whole tubular surface, and is outputted with the magnification set point. Let the offset adder unit 56 which supplies the analog signal adding amount of predetermined offset 11of to A-D converter 75, and the frequency shaft scale section of the partition field 20 be the configuration means which carry out sweep control of the frequency-conversion section 60 as a frequency span of a frequency shaft in response to said multiplication signal. In the display of the spectrum screen which has A-D converter 75 which carries out quantization conversion of the frequency conversion section 60 which carries out sweep measurement, and the analog direct current signal of the detected spectrum level by this at digital data, expansion/contraction zoom function with the sufficient operability only by only carrying out partition assignment of the partition field 20 made into the purpose is realizable. [0011]

[Embodiment of the Invention] The gestalt of operation of this invention is explained with reference to a drawing with an example below at a detail.

[0012] (Example 1) The internal configuration Fig. of the gain offset transducer of drawing 5 is indicated to be the example of spectrum which carried out an expansion zoom of the important section block diagram of the spectrum analyzer of drawing 1, the explanatory view of the gain offset transducer of drawing 2 of operation, and the Y-axis scale of drawing 3 about this invention example, and the example which indicates the spectrum level by zooming so that the assignment level location 10 on a tubular surface may serve as immobilization in a display position is explained.

[0013] The important section configuration of the spectrum analyzer of this invention changes with the frequency-conversion section 60, the gain offset transducer 50, A-D converter 75, the operation control section 80, and a display 90, as shown in drawing 1. With this configuration, others are the same as that of a configuration conventionally except for the gain offset transducer 50 and the operation control section 80.

[0014] The gain offset transducer 50 carries out zooming magnification so that the assignment level location 10 may serve as immobilization, as the display position of the assignment level location 10 on the tubular surface shown in drawing 2 (a) shows drawing 2 (c). namely, predetermined [ of the tubular surface display only about the part excluding request offset in response to analog direct current signal 71dc from the frequency-conversion section 60 ] — it is made to correspond to resolution 12 and zooming magnification is carried out. in addition, predetermined [ the assignment level location 10 on a tubular surface and predetermined / of a tubular surface display ] — resolution 12 is setups given by the operator. A setup of the information on this assignment level location 10 is given by tab-control-specification means to mention later. A formula is shown and explained about this. It is assumed first that it is the element component of amount of analog direct current signal  $71dc = \text{offset } 11of + \text{difference daily dose } 71diff$ . In this case, in the assignment level location 10, though natural, the amount of difference daily dose 71diff is zero. moreover, predetermined [ which was given by the setups of zooming of a tubular surface display ] — the magnification value corresponding to resolution 12 is assumed to be magnification set point 13mul. here — predetermined — resolving power 12 — usually — 1, 2, 5, and a 10 dB/Div. step — resolving power — since it indicates by the range, magnification set point 13mul serves as the set point of the scale factor corresponding to this. the resolving power in which the gain offset transducer 50 carries out a magnification output as a result — the magnification output of the direct current signal by the formula of amount of expanding-and-contracting level signal  $51 = (\text{amount of analog direct current signal } 71dc - \text{offset } 11of) \times \text{magnification set point } 13mul + \text{offset } 11of$  is performed.

[0015] Next, the concrete example of an internal configuration of the gain offset transducer 50 shown in drawing 1 for performing said magnification is explained. A configuration changes by the offset subtraction section 52, the multiplication section 54, the offset adder unit 56, and DA converters 58 and 59, as shown in drawing 5 (a). The multiplication section 54 and DA converter 59 are the same as usual with this configuration. The offset subtraction section 52 receives analog direct current signal 71dc from the detection section 70, receives amount of predetermined offset 11of corresponding to the level of the assignment level location 10 shown in drawing 2 (a) through DA converter 58 from the operation control section 80, and outputs the difference signal  $(71dc - 11of)$  of both signals. The condition that the offset shift of the signal 10b of drawing 2 (a) was carried out by this subtraction is shown. the multiplication section 54 — said difference signal 10b — winning popularity — predetermined [ of a tubular surface display ] — resolution — in response to magnification set point 13mul corresponding to 12 setup, the multiplication signal  $((71dc - 11of) \times 13mul)$  which carried out the multiplication of both is outputted. Signal

10c of drawing 2 (b) is the signal by which multiplication was carried out, and the condition that zooming magnification only of the signal except offset was carried out is shown. the resolving power which the offset adder unit 56 received said multiplication signal, and added both in response to amount of predetermined offset 11of — expanding—and—contracting level signal  $51 = [(71dc - 11of) \times 13mul] + 11of$  is outputted. 10d of signals of drawing 2 (c) shows this output signal condition. It turns out that the assignment level location 10 which this shows to drawing 2 (a) serves as a status signal which also set to 10d of signals from which drawing 2 (c) was changed, and was expanded / reduced by immobilite.

[0016] In addition to the conventional operation control, the operation control section 80 shown in drawing 1 performs data processing which controls said gain offset transducer 50 and serves as a desired tubular surface display. As operation control concerning concrete this invention, an operator is asked [ 1st ] for the input level of the input edge of A-D converter 75 corresponding to this level location as amount of offset 11of in response to assignment level location 10 information on a tubular surface, and amount of predetermined offset 11of is supplied through DA converter 58 after this. predetermined [ of a tubular surface display according / magnification set point 13mul which is the resolution of a Y-axis scale the 2nd / to a key input setup from an operator etc. ] — resolution — in response to 12 information, magnification set point 13mul displayed on the Y-axis scale on the tubular surface corresponding to this input setup (for example, 1, 2, 5, 10dB/Div.) is computed, and the multiplication section 54 is supplied through DA converter 58. In addition, about this calculation of magnification set point 13mul, it is the same as that of the conventional technique. In addition, it is good also as zoom actuation of the rise/down expanded or reduced at a request step (1, 2, 5, 10) by rise/down key input other than the direct setting input of the range numeric value by the numerical-keypad input from an operator.

[0017] According to the configuration of the above-mentioned invention, the assignment level location 10 on a display tube side is directed, the advantage from which this assignment level location 10 can serve as immobilization on a screen is acquired, and the advantage which can realize the zoom function of zooming of the spectrum level centering on an observing point to carry out spectrum analysis is acquired. For example, the example of a condition which carried out an expansion zoom as shown in 2 dB/Div shown in drawing 3 (b) from Y-axis scale 10 dB/Div as an example of an expansion zoom in the assignment level location 10 of drawing 3 (a) is shown. Thus, since it becomes a display centering on the attention station made into the purpose in this invention, the advantage from which the advantage whose view migration is lost is acquired, and the mistake which overlooks an observing point disappears, and re-assignment of the assignment level location 10 becomes unnecessary in a repeat zoom is also acquired, and zoom actuation which noted the observing point can be performed easily. Consequently, an operator has the advantage which can enjoy much more convenience.

[0018] By this invention, it is considering as the zoom technique which indicates the spectrum level by zooming so that this assignment level location 10 may serve as immobilization on a screen in response to the setting information on the assignment level location 10 on a display tube side, or the arbitration assignment point like the above-mentioned explanation.

[0019] In addition, there is an example used as input in the arbitration pointer in which point assignment is freely possible about an example [ which uses as input the existing marker (pointer which moves the envelope top of spectrum in a migration or spectrum peak top) which the spectrum analyzer has as a tab-control-specification means to give the assignment level location 10 on said tubular surface ], and screen top. An operator sets up the desired assignment level location 10 beforehand with these tab-control-specification means.

[0020] (Example 2) The important section block diagram of the spectrum analyzer of drawing 6 and the display explanatory view of the partition zoom of drawing 4 are shown and explained about this invention example. It is the example which carries out the enlarged display of both the shaft orientations of frequency shaft orientations level in the direction of a Y-axis scale for the specified partition field 20 to the whole tubular surface in the spectrum on the tubular surface of the measurement signal 100-ed in this invention.

[0021] The gain offset transducer 50 shown in drawing 6 performs magnification which carries out the enlarged display of the Y-axis scale to the whole tubular surface, and is the same as that of the above-mentioned example 1. namely, predetermined [ which shows the part excluding amount of predetermined offset 11of from analog direct current signal 71dc to drawing 4 (b) in the partition field 20 of the display assignment on the tubular surface shown in drawing 4 (a) in order to expand a Y-axis scale to the whole tubular surface ] — it is made to correspond to resolution 12 and expansion magnification is carried out. predetermined [ from which middle point location 20ctr of the specified partition field 20 which is shown in drawing 4 (a) is specifically calculated as amount of offset 11of, and the Y-axis scale section 25 of the

partition field 20 serves as a screen-display top and a minimum ] — it asks for resolution 12, and magnification set point 13mul corresponding to this is computed, it sets up respectively, and analog direct current signal 71dc is amplified like the above-mentioned example 1.

[0022] In order to carry out the enlarged display of the horizontal frequency shaft orientations of another side to the whole tubular surface, it is necessary to control to carry out the sweep of the frequency-span section shown in drawing 4 (a). A sweep setup of the frequency-conversion section 60 is controlled so that start frequency 31low of the horizontal frequency shaft scale section 35 when the partition field 20 was specified, and termination frequency 32hi specifically serve as a frequency span. These results, as shown in drawing 4 (b), the enlarged display of the appointed partition field 20 will be carried out to the whole tubular surface by the rise key stroke. In addition, screen-display conditions just before carrying out an enlarged display are memorized, for example, you may enable it to return from a current enlarged display condition to the original reduced-screen condition by the down key stroke. Furthermore, this storage of screen-display conditions that carries out an enlarged display is memorized each time, and it is good also as a configuration which measures the convenience of operability so that it may change to a former expansion or both directions of a contraction zoom at any time by rise/down key stroke and can display on them.

[0023] By this invention, it is considering as the technique of carrying out the enlarged display of this partition field 20 to the whole screen in response to the setting information on the partition field 20 of assignment on a display tube side like the above-mentioned explanation. Moreover, a means to memorize the hysteresis of former screen-display conditions is established, and a hysteresis status-display means to return to former screen-display size easily may be added.

[0024] According to the configuration of the above-mentioned invention, the advantage which can realize the good zooming zoom function of operability by specifying the partition field 20 of attention on the screen which wants to carry out spectrum analysis of the measurement signal 100-ed is acquired. In addition, although the assignment level location 10 on the display tube side set up in the above-mentioned example and the display appointed partition field 20 on a tubular surface are set up by the rotary knob which equipment has, a key switch, a cursor key, etc., they are good also as an equipment configuration which forms input devices, such as a mouse interface and a touch panel, by request, and carries out tab control specification by this actuation.

[0025] In addition, it sets in the configuration of the gain offset transducer 50 shown in drawing 5 (a) in the above-mentioned example. Instead of this configuration, as shown in drawing 5 (b), it considers as the configuration of the multiplication section 54, the offset subtraction section 57, and DA converters 58 and 59. The operation control section 80 may calculate, give and constitute the set point to which {11ofx (13mul-1)} carries out comparatively offset data 11dat given to DA converter 58, and can carry it out similarly.

[0026] In addition, although the example which prepares and carries out the circuit of the gain offset transducer 50 shown in drawing 5 (a) explained in the above-mentioned example, there is a means which carries out a zoom in software instead of preparing this offset subtraction section 52 and offset adder unit 56. In this case, conventionally, the setups to the multiplication section 54 of a configuration do not change, but they remain as it is, and the operation control section 80 corresponds and carries out zoom data processing to the gain offset transducer 50 in response to the measurement data which carried out the AD translation by A-D converter 75. Since a spectrum display becomes coarse when a zoom dilation ratio is large, this zoom technique like software may become waveform analysis with a difficulty, but in the zoom conditions of finite, since the need of adding a circuit is lost, a cheaply realizable advantage is acquired.

[0027] In addition, although the example in which the spectrum display of a spectrum analyzer carries out zooming explained in the above-mentioned example, it is clear that it is applicable similarly in a network analyzer.

[0028]

[Effect of the Invention] This invention does so the effectiveness indicated by the following from the above-mentioned contents of explanation. In the example 1, the assignment level location 10 on a display tube side is directed, the advantage from which this assignment level location 10 can serve as immobilization on a screen is acquired, and the advantage which can realize the zoom function of zooming of the spectrum level centering on an observing point to carry out spectrum analysis is acquired. Therefore, since it becomes a display centering on the target attention station, the advantage from which the advantage whose look migration accompanying a complicated numerical-keypad input is lost like before is acquired, and \*\*\*\*\* of an observing point disappears, and re-assignment of the assignment level

location 10 becomes unnecessary in a repeat zoom is also acquired, and zoom actuation which noted the observing point can be performed easily. Consequently, an operator has the advantage which can enjoy the convenience of the zoom actuation which is easy to concentrate on spectrum observation.

[0029] In the example 2, the enlarged display of the partition field 20 specified while looking at the screen will be carried out to the whole tubular surface. Since a directions setup of the partition can be carried out easily, looking at a screen also in this case, the advantage to which setting actuation becomes easy is acquired. Moreover, since the purpose field can be specified on a screen, observing the situation that an examined spectrum signal changes every moment, the advantage to which pinpointing of a field made into the purpose becomes easy is acquired. In addition, the advantage which can return from an enlarged display condition to the original reduced-screen condition easily when it has the storage means of screen-display conditions just before carrying out an enlarged display is also acquired, when it has further a means to memorize this storage of screen-display conditions that carries out an enlarged display at every zoom, bidirectional operability of a former expansion or a contraction zoom display is made simple, and convenience improves further.

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[Translation done.]



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## DESCRIPTION OF DRAWINGS

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### [Brief Description of the Drawings]

[Drawing 1] It is the important section block diagram of a spectrum analyzer of this invention example 1.

[Drawing 2] It is the explanatory view of a gain offset transducer of operation of this invention example 1.

[Drawing 3] They are the example of Y-axis scale 10 dB/Div of this invention example 1, and the example of spectrum which carried out an expansion zoom to 2 dB/Div.

[Drawing 4] It is the display explanatory view of the example of a partition zoom of this invention example 2.

[Drawing 5] It is the internal configuration Fig. of a gain offset transducer of this invention.

[Drawing 6] It is the important section block diagram of a spectrum analyzer of this invention example 2.

[Drawing 7] It is the conventional example of an important section configuration of a general spectrum analyzer.

### [Description of Notations]

10 Assignment Level Location

11of(s) The amount of predetermined offset

13mul(s) Magnification set point

20 Partition Field

25 Y-axis Scale Section

35 Frequency Shaft Scale Section

50 Gain Offset Transducer

50b Gain transducer

52 57 Offset subtraction section

54 Multiplication Section

56 Offset Adder Unit

58 59 DA converter

60 Frequency-Conversion Section

70 Detection Section

71dc(s) Analog direct current signal

75 A-D Converter

80 Operation Control Section

90 Display

100 Measurement Signal-ed

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[Translation done.]

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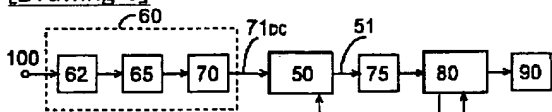
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## DRAWINGS

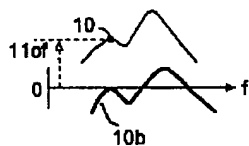
[Drawing 1]



60...ゲイン・オフセット交換部  
65...周波数変換部  
70...検波部  
71dc...アナログ直流信号  
75...A/D変換器  
80...演算制御部  
90...表示装置  
100...被測定信号

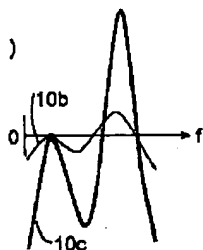
[Drawing 2]

(a)

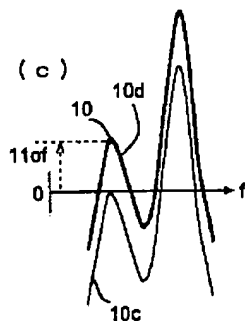


10...指定レベル位置  
11of...所定オフセット量

(b)

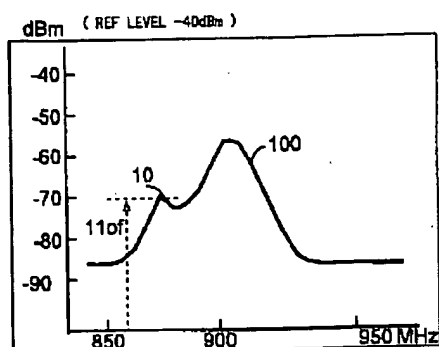


(c)

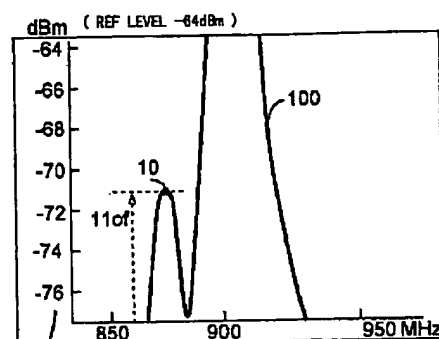


[Drawing 3]

( a )



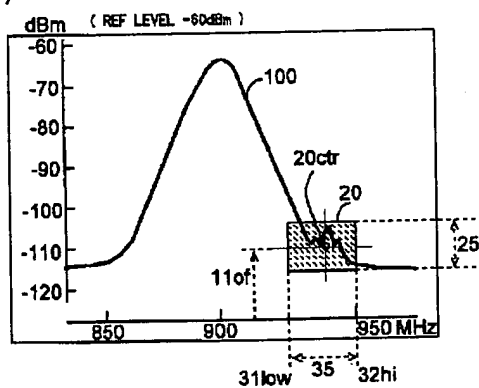
( b )



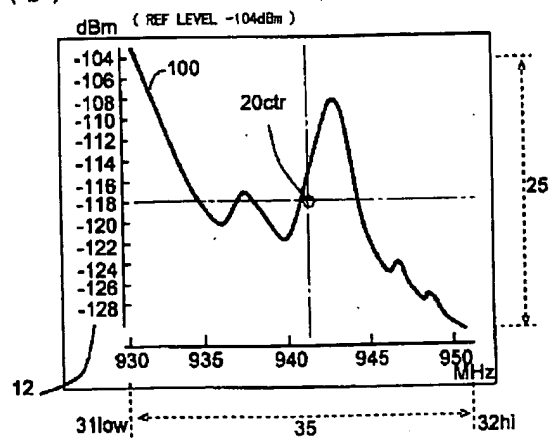
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[Drawing 4]

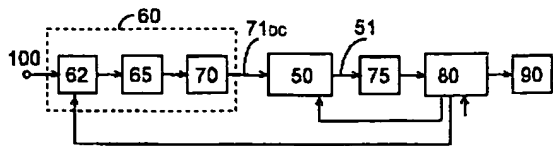
( a )



( b )

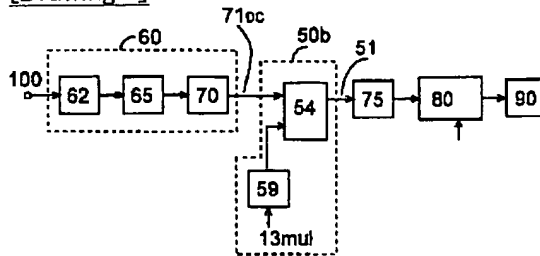


[Drawing 6]



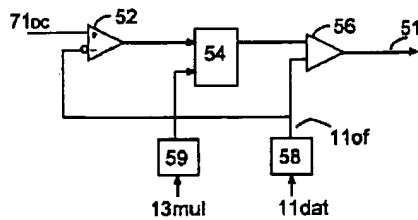
50...ゲイン・オフセット変換部  
 54...乗算部  
 59...D/Aコンバータ  
 60...同波数変換部  
 65...対数アンプ  
 70...検波部  
 71dc...アナログ直流信号  
 75...A/D変換器  
 80...演算制御部  
 90...表示装置  
 100...被測定信号

[Drawing 7]

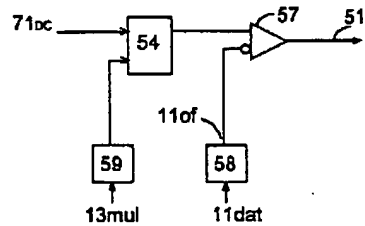


[Drawing 5]

(a)



(b)



11dat...オフセットデータ  
 11of...所定オフセット量  
 13mul...増幅設定値  
 51...分周能拡張レベル信号  
 62, 67...オフセット演算部  
 54...乗算部  
 56...オフセット加算部  
 58, 59...D/Aコンバータ  
 71dc...アナログ直流信号

[Translation done.]